

IN THE CLAIMS:

Please cancel claims 5 and 8, add new claim 30 and amend claims 1-4, 6, 7, 10-12, 14-16, 18-26 and 28 of the above-identified application as follows.

1. (Currently Amended) A device for determining the properties of surfaces having:

at least one first radiation means having at least one first radiation source which directs substantially collimated radiation at a predetermined angle towards a measurement surface;

at least one second radiation means having at least one second radiation source which projects substantially non-collimated radiation onto the measurement surface;

at least one radiation detector means which captures at least a portion of the radiation reflected and/or diffused off the measurement surface and emits at least one measurement signal which is characteristic of the reflected and/or diffused radiation;

~~wherein the space above the measurement surface has substantially radiation absorbing properties~~  
said at least one second radiation means comprises at least one radiation diffuser means, mounted at a specified diffuser surface angle relative to a geometrical connecting axis extending from said second radiation means to a geometrical center of the measurement surface, wherein a spatial orientation and position of a diffuser surface of said at least one second radiation means is variable relative to the geometrical connecting axis.

2. (Currently Amended) The device according to claim 1,  
wherein

~~the~~an angle formed by a first geometrical connecting axis extending  
from the at least one radiation detector means to ~~the~~a geometrical center of the  
measurement surface and a projection of said first geometrical connecting axis to  
the measurement surface, is variable;

and ~~preferably also that~~an angle formed by a second geometrical  
connecting axis extending from the at least one first radiation means to the  
geometrical center of the measurement surface and a projection of said second  
connecting axis onto the measurement surface, ~~are~~is variable.

3. (Currently Amended) The device according to claim 1,

wherein ~~the~~a distance from said first radiation means to the  
measurement surface is between 1 cm and 30 cm, preferred between 2 cm and 20  
cm, particularly preferred between 2 cm and 7 cm.

4. (Currently Amended) The device according to claim 1,

wherein substantially non-collimated radiation is emitted onto the  
measurement surface from a plurality of said at least one second radiation means.

5. (Cancelled)

6. (Currently Amended) The device according to claim 1,  
wherein at least one radiation diffuser means is selected from a  
group of radiation diffuser means comprising radiation diffuser disks, frosted  
glass disks, and diffuser films ~~and the like~~.

7. (Currently Amended) The device according to claim 1,  
~~wherein said diffuser surface of said at least one radiation diffuser~~  
~~means is mounted at a specified diffuser surface angle relative a geometrical~~  
~~connecting axis from said radiation means to the geometrical center of the~~  
~~measurement surface, said angle being~~ is ~~between 0 degrees and 90 degrees,~~  
preferred between 30 degrees and 90 degrees, particularly preferred between 75  
degrees and 90 degrees.

8. (Cancelled)

9. (Previously Presented) The device according to claim 1,  
wherein said at least one first and at least one second radiation  
means are positioned in a housing above the measurement surface.

10. (Currently Amended) The device according to claim 1, wherein the space inside the housing has substantially radiation-absorbing properties.

11. (Currently Amended) The device according to claim 1, wherein said housing is substantially configured radiation-proof, preferably light-proof, such that substantially no radiation can enter the housing other than such radiation as diffused and/or reflected off the measurement surface.

12. (Currently Amended) The device according to claim 1, wherein said second radiation means are positioned on a geometrical spherical surface or the geometrical surface of a rotational ellipsoid above the measurement surface.

13. (Previously Presented) The device according to claim 1, wherein at least one radiation source is variable in at least one radiation parameter selected from a group comprising radiation intensity, radiation wavelength, direction of radiation polarization, temporal radiation intensity modulation and the like.

14. (Currently Amended) The device according to claim 1,  
wherein at least two of said first and second radiation sources are  
variable independent of each other in at least one radiation parameter.

15. (Currently Amended) The device according to claim 1,  
wherein said at least one first and second radiation source ~~is~~ sources  
are selected from a group of radiation sources comprising thermal radiation  
sources, in particular but not exclusively light bulbs, halogen light bulbs, coherent  
and non-coherent semiconductor radiation sources, gas discharge radiation  
sources, and lasers ~~and the like~~.

16. (Currently Amended) The device according to claim 1,  
wherein at least two of said first and second radiation sources and/or  
radiation detector means have different spectral radiation characteristics.

17. (Previously Presented) The device according to claim 1,  
wherein the radiation from said first radiation means is collimated by  
at least one radiation directing means.

18. (Currently Amended) The device according to claim 17,

wherein said at least one radiation directing means comprises at least one radiation directing component selected from a group of radiation directing components comprising lens components, micro lens components, micro lens arrays, diffracting components, reflector components, in particular but not exclusively parabolic reflectors, grating components, volume grating components, and holographic components ~~and the like~~.

19. (Currently Amended) The device according to claim 1, wherein said first radiation means comprises at least one diaphragm means, preferably but not limited to apertured diaphragms positioned in ~~the~~ a path of radiation.

20. (Currently Amended) The device according to claim 1, wherein said device is preferably movable relative the measurement surface such that ~~the~~ a distance between the first and second radiation means and the measurement surface remains substantially constant.

21. (Currently Amended) The device according to claim 1, wherein at least one travel measurement means is provided which emits at least one measurement signal ~~which is characteristic of the~~ corresponding

to a traveled distance of the ~~relative movement~~ travel measurement means from the device to the measurement surface.

22. (Currently Amended) The device according to claim ~~421~~, further including a housing;

wherein said at least one travel measurement means is positioned inside and/or outside the housing.

23. (Currently Amended) The device according to claim 1, wherein at least one coating-thickness measurement means is provided for determining ~~the~~ a coating thickness of the measurement surface to be examined comprising at least one coating thickness sensor which emits a measurement signal representative of the coating thickness to be determined.

24. (Currently Amended) The device according to claim ~~423~~, further including a housing;

wherein said at least one coating-thickness measurement means is positioned inside and/or outside the housing.

25. (Currently Amended) The device according to claim 1, further including a travel measurement means and a coating-thickness measurement means;

wherein at least one processor means and one memory means is provided which allow an allocation of the measurement signals of the radiation detector means and/or the measurement signals of the travel measurement means and/or the coating-thickness measurement means to specified locations, in particular but not exclusively to the same location on the measurement surfaces.

26. (Currently Amended) A method for determining the properties of surfaces in particular using a device according to claim 1,

comprising said at least one first radiation means ~~according to claim 1~~, and wherein

said at least one second radiation means ~~according to claim 1~~ projects at least a portion of the radiation from ~~it~~ said at least one second radiation source onto the measurement surface;<sub>i</sub>

said at least one ~~provided~~ radiation detector means captures at least a portion of the radiation reflected and/or diffused off the measurement surface and emits at least one measurement signal which is characteristic of the reflected radiation;<sub>i</sub>

at least one control means is provided for controlling the capture of the measurement signals of the radiation detector means;<sub>i</sub> and

at least one output means is provided for outputting ~~the~~ at least one measurement result.



27. (Previously Presented) The method according to claim 26,

wherein at least one processor means is provided for evaluating the measurement signals and deriving therefrom at least one parameter which characterizes the properties of the measurement surface and which can be output at least on one output means.

28. (Currently Amended) The method according to claim 26, further including a travel measurement means and a coating-thickness measurement means;

wherein at least one control means is provided for controlling the capture of the measurement signals from the radiation detector means and/or the travel measurement means and/or the coating-thickness measurement means and stores same in at least one provided memory means.

29. (Previously Presented) The method according to claim 26,

wherein the radiation from said second radiation means is substantially reflected and/or diffused only once off the measurement surface and/or off a surface substantially parallel thereto.

30. (New) The device according to claim 1, wherein a space above the measurement surface has substantially radiation-absorbing properties.